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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/649,133

08/27/2003

Dennis Hugh Barnes

DEI 008

4778

35070

7590

07/13/2006

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EXAMINER

NI, SUHAN

ART UNIT

PAPER NUMBER

2615

DATE MAILED: 07/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/649,133

Applicant(s)

BARNES, DENNIS HUGH

Examiner

Suhan Ni

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-28 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. This communication is responsive to the application and claims filed 08/27/2003.

Election/Restriction

2. This application contains claims directed to the following patentably distinct species of the claimed invention:

- I. Claims 1-8 and 28 drawn to the structures/structural elements of a loudspeaker, including a magnetic structure comprising: portions defining an opening along the axis, the first end of the pole piece being positioned in the opening of the magnetic structure to form a gap between the first end of the pole piece and the portions defining the opening of the magnetic structure proximate to the first end of the pole piece, the portions defining the opening that are proximate the first end of the pole piece being magnetically coupled to the first magnetic pole, resulting in a magnetic field in the gap; and a voice coil sliding on the first end of the pole piece along the axis in the gap and so on;
- II. Claims 9-14 drawn to the structures/structural elements of a loudspeaker; including a pole piece comprising a top end and a base, the top end comprising cylindrical walls elongated along a center line axis, the walls comprising at least one pole piece irregularity, the base having a base diameter larger than diameter of the top end; a magnet comprising first and second magnet surfaces normal to the axis, and portions defining a magnet opening extending along the axis; a front plate comprising first and second front plate surfaces normal to the axis, and portions defining a front plate opening with at least one front plate irregularity,

the second front plate surface being attached to the first magnet surface; an upper back plate comprising first and second upper back plate surfaces normal to the axis, and portions defining an upper back plate opening extending along the axis between the first and second upper back plate surfaces, the upper back plate opening comprising a first space with a first dimension near the first upper back plate surface and a second space with a second dimension near the second upper back plate surface, the first dimension being smaller than the second dimension, the first dimension being smaller than the base diameter, the first upper back plate surface being attached to the second magnet surface, a lower back plate attached to the second upper back plate surface; and a voice coil sliding on the top end of the pole piece; wherein the base is positioned in the second space, the top end is positioned in the front plate opening to form a gap between the top end and the front plate, magnetic field extending through the gap, the lower and upper back plates are capable of loose and tight attachment, the pole piece being capable of rotation around the axis relative to the front plate to change strength of the magnetic field when the upper and lower back plates are loosely attached to each other.

- III. Claims 15-16 drawn to the structures/structural elements of a loudspeaker; including a basket; a diaphragm, a spider attached to the basket; a pole piece comprising a top end and a base, the top end comprising cylindrical walls elongated along a center line axis, the walls comprising at least one pole piece irregularity, the base having a base diameter larger than diameter of the top end; an annular magnet comprising first and second magnet surfaces normal to the

axis, and portions defining a magnet opening extending along the axis; a front plate attached to the basket, the front plate comprising first and second front plate surfaces normal to the axis, and portions defining a front plate opening with at least one front plate irregularity, the second front plate surface being attached to the first magnet surface; an upper back plate comprising first and second upper back plate surfaces normal to the axis, and portions defining an upper back plate opening extending along the axis between the first and second upper back plate surfaces, the upper back plate opening comprising a first space with a first diameter near the first upper back plate surface and a second space with a second dimension near the second upper back plate surface, the first dimension being smaller than the second dimension, the first dimension being smaller than the base diameter, the first upper back plate surface being attached to the second magnet surface.

- IV. Claims 17-20 drawn to the structures/structural elements of a loudspeaker; including a magnetic pole piece comprising a bottom end and a top end elongated along an axis; a magnetic structure comprising: a magnet comprising a first magnetic pole and a second magnetic pole, and portions defining a first opening extending along the axis, the first end being positioned in the first opening to form a first gap between the first end and the portions defining the first opening, the portions defining the first opening being magnetically coupled to the first magnetic pole; a non-magnetic center thread component attached to the second end, the center thread component having a threaded jutting part positioned in the second opening and engaging the threaded portions so that rotation of the center

thread component relative to the back plate moves the center thread component and the pole piece along the axis in relation to the back plate, varying a second gap between the back plate and the pole piece, thereby varying magnetic coupling between the pole piece and the back plate, and thereby varying magnetic field in the first gap.

- V. Claims 21-26 drawn to the structures/structural elements of a loudspeaker; comprising a magnetic pole piece comprising a cylindrical top end elongated along a centerline axis, and a bottom end comprising portions defining an aperture extending along the axis; a magnet comprising first and second magnet surfaces normal to the axis; a magnetic front plate comprising first and second front plate surfaces normal to the axis, and portions defining a front plate opening between the first and second front plate surfaces, the second front plate surface being attached to the first magnet surface; a magnetic back plate comprising first and second back plate surfaces normal to the axis, and portions defining a back plate opening between the first and second back plate surfaces, the portions defining the back plate opening comprising portions defining a first space with a first dimension near the first back plate surface and threaded portions defining a second space with a second diameter near the second back plate surface; a non-magnetic center thread component comprising an inner part positioned in the aperture and a jutting part protruding from the aperture, the jutting part being threaded into the second space so that the top end is positioned in the front plate opening to form a gap between the pole piece and the front plate; and a voice coil sliding on the top end.

VI. Claim 27 drawn to the structures/structural elements of a loudspeaker, comprising: a basket; a diaphragm; a spider attached to the basket; a magnetic pole piece comprising a cylindrical top end elongated along a center line axis, and a bottom end comprising portions defining an aperture extending along the axis; a magnet comprising first and second magnet surfaces normal to the axis; a magnetic front plate attached to the frame, the front plate comprising first and second front plate surfaces normal to the axis, and portions defining a front plate opening between the first and second front plate surfaces, the second front plate surface being attached to the first magnet surface; a magnetic back plate comprising first and second back plate surfaces normal to the axis, and portions defining a back plate opening between the first and second back plate surfaces, the portions defining the back plate opening comprising portions defining a first space with a first dimension near the first back plate surface and threaded portions defining a second space with a second diameter near the second back plate surface; a non-magnetic center thread component comprising an inner part positioned in the aperture and a jutting part protruding from the aperture, the jutting part being threaded into the second space so that the top end is positioned in the front plate opening to form a gap between the pole piece and the front plate; and a voice coil sliding on the top end, the voice coil comprising a former attached to the spider and to the diaphragm, the voice coil further comprising wire windings capable of receiving driving current.

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Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no group is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

3. Applicants are advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement is traversed (37 CFR 1.143).

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the

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application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

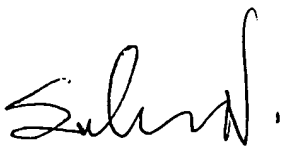
Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is **(571)-272-7505**, and the number for fax machine is **(571)-273-7505**. The examiner can normally be reached on Monday through Thursday from 10:00 am to 8:00 pm. If it is necessary, the examiner's supervisor, **Sinh N. Tran**, can be reached at **(571)-272-7564**.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (**PAIR**) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

7. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is **(571)-272-2600**, or please see <http://www.uspto.gov/web/info/2600>.

July 9, 2006


SUHAN NI
PRIMARY EXAMINER